

# MAST Academy

Maritime and Science Technology High School

## *Executive Summary*



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**MAST Academy's** high quality educational program prepares young adults for life in an ever-changing and complex world. The Executive Summary highlights the efforts and achievements of an entire community of learners striving for educational excellence.

Evidence of a commitment to quality through unique learning opportunities and situations abound at this maritime and science technology high school. Distance learning venues, lab and workplace stations, trips abroad, travel to student conferences, internships, and field work are available to all students. This same kind of commitment earned MAST the United States Department of Education New American High School distinction.



**Dr. Consuelo V. Dominguez**  
*Principal*

The MAST Academy has an abiding tradition of academic excellence and community service. We are honored to accept the challenge to prepare students for both the responsibilities of active citizenship and the demands of 21st century workplace environments. The school's marine theme is enhanced through the infusion of technologies tailored to the needs of students in the various content areas. Computers, high-resolution projectors, fast Internet access, SMART technology and document cameras provide essential support to the instructional practices of teachers in all disciplines.

MAST Academy's faculty and staff are committed to providing students with outstanding educational opportunities and services. The Executive Summary presents an overview of our unique programs, facilities, and theme-related activities. As principal of this nationally recognized showcase site school and on behalf of the faculty and staff, I welcome you to visit the MAST Academy to view our outstanding achievements first-hand.

Sincerely,

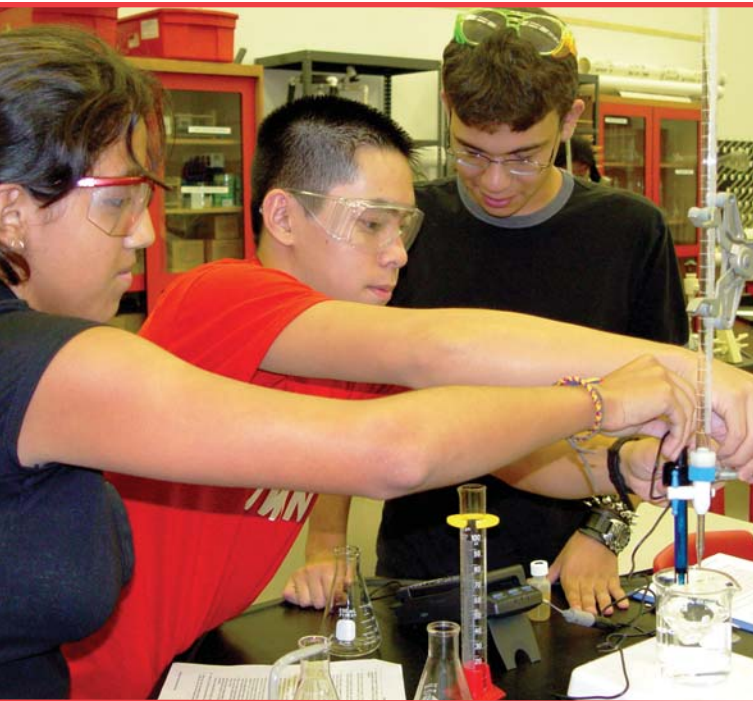
A handwritten signature in cursive script that reads "Consuelo V. Dominguez". The signature is written in dark ink on a light-colored, slightly textured background.

Consuelo V. Dominguez, Ed. D.  
Principal

## Description

The MAST Academy is a nationally recognized, innovative school of choice with a marine theme. Students with high academic and personal development expectations seek admission through a multifaceted application process.

MAST's 550 students in grades 9-12 use state-of-the-art technology and real-world laboratory equipment. Students engage in hands-on experiences through diversified teaching strategies, classroom simulations, and internship/job placements.



Collaboration during lab time promotes a good work ethic.

## Unique Features

- Academic majors program
- Field research opportunities aboard seagoing vessels
- Coast Guard JROTC program
- College-like master schedule
- Quarterly academic symposia
- Intel projects and independent research opportunities
- 75 community service hours (with 50 hours on a single project)
- Weekly Captain's Call
- Outreach Program for elementary and middle school students
- Unique courses: Ethics & Leadership, Engineering Drawing, Introduction to Engineering, Web Design, Maritime Literature, Intel Research, Solar Energy, SCUBA, Hospitality Management, Information Technologies, Environmental Art, Coast Guard JROTC



Students and teachers collaborate on field research.



Students have opportunities to earn various water certifications.

## Vision

A Nationally Recognized Leader Defining Excellence in College Preparatory and Marine Related Career Education

### Students of all races and ethnicities

- work side by side with scientists, corporate executives, and waterfront operations personnel
- sail local, state, and international waters to conduct original research
- present papers at national conferences
- learn honor and integrity through leadership and social interaction
- obtain scholarships and financial support for post-secondary study

### Families

- participate in their children's education and school operations

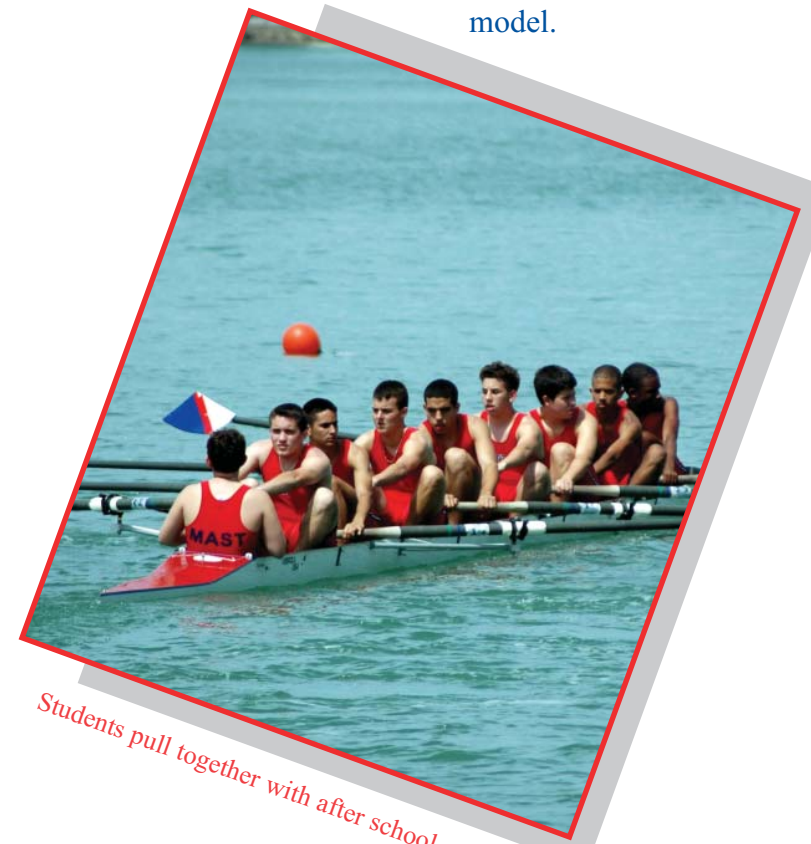
### Staff

- network with business leaders, science agency researchers, and university scholars to support learning

## Beliefs

We at MAST Academy believe that:

- Curriculum, instructional practices, and assessments must incorporate a variety of learning activities and opportunities to enable students to achieve academic success.
- Individual student performance is increased when students are actively involved in the learning process, presented with a challenging curriculum, and provided with a variety of instructional approaches.
- A safe, attractive, comfortable, and clean environment promotes student learning.
- Students should be encouraged to be members of an academic family that sets high standards for everyone.
- Stakeholders share the responsibility for advancing the school's mission and nurturing intellectual freedom.
- A small focused center where stakeholders truly care about each other is the MAST model.



Students pull together with after school activities.



Internships and guided research help prepare students for college and the workplace.

## Curriculum

Curriculum at MAST Academy capitalizes on Miami's geographic and business advantage as a center of marine study and maritime industry operations. Students choose from three career-oriented majors:

- Maritime Related Industries
- Marine Studies and Culture
- Oceanic and Atmospheric Science Technology

After selecting their major, students choose courses such as solar energy, maritime literature, Coast Guard JROTC, SCUBA, engineering, CAD, introduction to hospitality, culinary arts, independent study, ethics and leadership, and internship.

Advanced Placement courses are offered in English, Spanish, French, U.S. history, government and economics, human geography, art history, calculus, statistics, environmental science, chemistry, biology, and physics. Dual enrollment courses for college credit are offered on MAST's campus through local universities.

A college-like schedule encourages the development of effective time management skills and supports a rigorous academic program.

## Instruction & Professionalism

Teachers and administrators participate in ongoing professional workshops in curriculum as well as technology implementation. Training presentations highlight assessment techniques, patterns of schooling, career education, and teachers as motivators. Efforts to mentor students, communicate with parents, and engage learners on a daily basis exemplify the professional attitude of staff. A strong commitment to pursue advanced degrees and continuing education reflects staff professionalism.

## Admissions

The admissions period extends from October 1 to January 31. Student applications exceed seats available by over a 4 to 1 ratio. A comprehensive screening process assesses student performance and potential. Students who qualify for MAST enter the District's random selection process. The school notifies applicants of their status in March.



USCG JROTC cadets onboard the USCGC Eagle

## Expected Outcomes

Students will be able to:

- enter the workforce with marketable skills: think critically, solve problems, interact with colleagues, use technology, read and write proficiently.
- apply skills in practical scientific internships or maritime job placements.
- meet or exceed college-entrance expectations (PSAT, SAT, ACT, various Advanced Placement exams)
- be placed in maritime and/or scientific agency career paths upon graduation with potential to earn professional licensure.
- participate in community service related to the preservation of the South Florida environment.

## School Life

For most MAST students, the school day extends long beyond the regular hours of operation. Many students begin their school commute at 5:15 A.M. and wait for the 5:00 P.M. activities bus



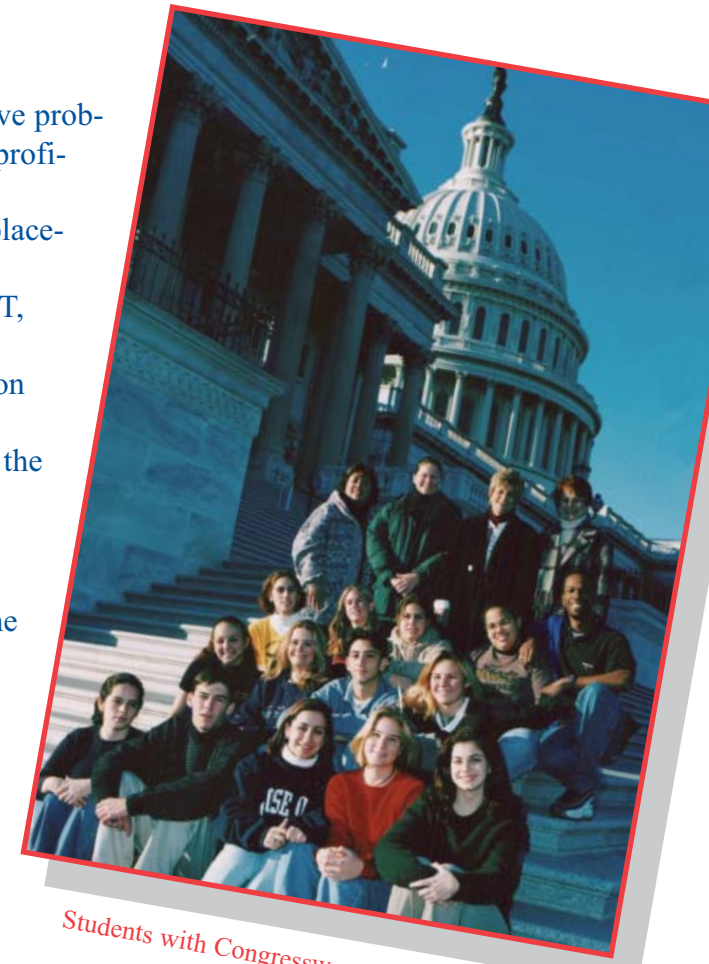
Practice makes perfect.

to start their trek home. The hours between early arrival and late departure are filled with learning, leadership, and personal growth opportunities. Classes, club meetings, symposia, field work, and peer interactions prepare our students to make their own place in the world. State, national, and international travel are an annual part of school life.

## Athletics & Activities

In addition to underscoring the importance of fitness as a lifelong goal, MAST's water-based physical education program has trained students for several district and state-ranked teams in crew, water polo, and swimming.

The Student Activities Program fosters lifelong learning and leadership skills. Service, career, and honors clubs, along with student government and class activities, promote positive attitudes, self-esteem, civic responsibility, and respect for others.



Students with Congresswoman Ileana Ros-Lehtinen (R)

MAST graduates attend some of the best colleges and universities in the nation.



# STAKEHOLDER INSIGHTS



"The MAST Academy was selected as a U.S. Blue Ribbon School of Excellence because of its teaching and student environment, curriculum and instruction, leadership, organization, parent and community support and other indicators of success."

**Frank T. Brogan**  
Former Florida Commissioner of Education  
Florida Department of Education



"Learning takes place both in and outside the classroom -- for students and teachers alike. Engagement, original research, and field work are the norm across the disciplines. Exemplary teaching and school leadership distinguish MAST from every other school I've been associated with in 27 years as a professional educator."

**Dr. Margaret Haun**  
Lead Teacher



"My experiences at MAST Academy prepared me to meet challenges and overcome obstacles. I attribute my early acceptance to the Tuskegee Veterinary School to the foundation built during my years at MAST."

**Fred Williams, III**  
Tuskegee Institute  
Class of 1994 Salutatorian

"Royal Caribbean Cruise Line believes that education is the foundation of the Greater Miami area. We live in a modern, ethnically-diverse community wherein we all need to understand each other better and prepare ourselves for the 21st century. It is through education that we will achieve these goals and that's why we invest in MAST Academy."

**John P. Fox**  
Royal Caribbean Cruiseline, Ltd.



"MAST Academy provides a positive, challenging, safe and beautiful environment, endless opportunities for independent study, scientific research, creative expression, athletic competition and the best possible preparation for entering America's finest universities. In a word MAST Academy is a prep school for success in college and life."

**Abisola Dubey**  
MAST Academy Parent  
2001-2005



"Students will never find a more unique and nurturing environment than MAST Academy. The values and opportunities the school offers its students are outstanding and the teachers and faculty are always positive and helpful. MAST teaches its students the skills to succeed in school and in life."

**Richard Issa**  
Class of 2003

"Working for the past three years with the outstanding group of faculty and students at MAST Academy has been one of the most enriching and gratifying experiences of my life. As my daughter enters her senior year, I look forward to continue working with the MAST family in preserving its outstanding achievements."

**Maria E. Fernandez**  
PTSA President, 2003-2004



Begun in 1984, the Inner City Marine Project (ICMP) became the forerunner marine education experience to the MAST Academy, which opened in 1991. The ICMP provided minority students an opportunity to learn about South Florida's marine environment and maritime careers. This early version of what would become the MAST Academy opened new horizons for students whose enthusiasm for science and environmental education prompted program expansion.

The vision for MAST Academy grew from the ICMP with instructional and learning venues linked to such national educational trends as business support for education, practical applications for learning, and strong parent support. MAST students have been the direct beneficiaries of collaboration and support from community businesses, the U.S. Coast Guard, science agencies, and universities. They have worked with teachers who connect learning to the world outside the classroom—and they are accustomed to seeing parents in the building five and often six days a week.

Over the course of fourteen years, MAST has benefited greatly from the strong and steady leadership of only two principals. Dr. Linda J. Eads had the vision for MAST, worked with architects to plan the site, and opened the school in 1991. Under Dr. Eads, the school developed relationships with fifty-two business partners, established business operation protocols that remain in place today, and began the work of structuring a marine-theme learning environment. The arrival of Dr. Consuelo Vidaillet Domínguez in 1997 meant a commitment to an array of instructional technologies, a re-thinking and expansion of curriculum, and increased opportunities for students to participate in field work as well as national and international travel-study programs.

MAST Academy received accreditation from the Southern Association of Colleges and Schools in 1994. In 1995, the school was

named a Blue Ribbon School of Excellence by the U.S. Department of Education (USDOE). A second nod from the USDOE followed in 1998 when MAST became a New American High School Showcase Site. Additional recognition has come from *BusinessWeek*, *Redbook*, *People*, and *Seventeen* magazines and the Florida Department of Education. International delegations from China, Azerbaijan, and England have visited the school in recent years to learn about instructional technology, theme infusion, student research, and a unique curriculum that includes both high school and college courses.

In fourteen years, MAST has set an extraordinary record of achievement. The school continues to attract visitors interested in educational reform. Annual open house events for prospective students attract thousands of families; applications to MAST come from countries around the world. For 135 new student positions each year the school receives over 650 applications. Relatively small graduating classes—typically between 125-130 students—generate millions of dollars in scholarships. One of the most visible signs of MAST's success is the remarkable college acceptance record of its students: nearly one hundred percent pursue college study and a quarter of the graduates in any given year's senior class will go on to the best colleges and universities in the country.

It is tempting to think that these successes are the result of an admissions process that rewards high grades and test scores. But, in fact, grades are only one of several criteria in the admissions review and hold no more weight than solid school attendance. The people who know MAST Academy best—its teachers, administrators, students, parents, and partners—attribute the school's success to several factors: strong parent and community support, an exciting curriculum, teaching and managerial excellence, and perhaps most important, a school culture that encourages a passion for knowledge and ideas.



NEW AMERICAN HIGH SCHOOL  
SHOWCASE SITE  
U.S. DEPARTMENT OF EDUCATION

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